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REMARKS

Applicants appreciate the Examiner's indication that claims 20 and 21 are directed to allowable subject matter.

Additionally, in the Office Action, the Examiner rejected claims 1-19, 22, and 24-25 based on numerous rejections under 35 U.S.C. § 103(a). In particular, the Examiner rejected claims 1 and 2 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,526,464 to Jobs et al. ("Jobs") in view of U.S. Patent No. 6,381,239 to Atkinson et al. ("Atkinson") and U.S. Patent No. 6,273,771 to Buckley et al. ("Buckley"); rejected claims 3 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, and Buckley, and further in view of U.S. Patent No. 6,301,623 to Simpson et al. ("Simpson"); rejected claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Buckley, Simpson and further in view of U.S. Patent No. 6,532,500 to Lie et al. ("Lie") and U.S. Patent No. 6,122,756 to Baxter et al. ("Baxter"); rejected claims 7 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Buckley, and U.S. Patent No. 4,845,736 to Posner et al. ("Posner"); rejected claims 9, 10, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, and U.S. Patent No. 6,330,614 to Aggarwal et al. ("Aggarwal"); rejected claims 11 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Aggarwal, and Buckley; rejected claim 14 and 17 under U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Aggarwal, and Simpson; rejected claims 15 and 16 under U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Aggarwal, Simpson, Li, and Baxter; rejected claims 18 and 19 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, and Buckley; rejected claim 22 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, and

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Buckley, in view of U.S. Patent No. 5,185,693 to Loftis et al. ("Loftis"); rejected claim 24 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, Buckley, and Li; rejected claim 25 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, and Buckley, and further in view of Baxter; rejected claims 1 and 2 under U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, and U.S. Patent No. 5,957,985 to Wong et al. ("Wong"); rejected claims 3 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, and Wong, and Simpson; rejected claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Wong, Simpson, Li, and Baxter; rejected claims 7 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Wong, and Posner; rejected claims 11 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, Aggarwal, and Wong; rejected claims 18 and 19 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, and Wong; rejected claim 22 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, Wong, and Loftis; rejected claim 24 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, Wong, and Li; and rejected claim 25 under U.S.C. § 103(a) as being unpatentable over Atkinson, Posner, Wong, and Baxter.

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Buckley. For the following reasons, Applicants respectfully traverse.

Jobs is directed to a system that includes a primary serial bus and one or more serial sub-buses separated from the primary serial bus by gating devices. (Jobs, Abstract). As disclosed in Fig. 2 of Jobs, gates, such as gates 206 and 208, are used to enable a selected one of sub-buses 214 and 216. (See Jobs, Fig. 2 and column 2, lines 26-46). This concept of creating sub-buses from a single bus, as disclosed by Jobs, is similar

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to the admitted conventional technique disclosed by Applicants in Fig. 1B. As shown in Fig. 1B of the pending application, a multiplexer 112 enables one of sub-buses 113 and 114 to be an active bus and isolates the non-active bus. (Specification, page 2, line 20 through page 3, line 5). As is further discussed in the specification, the bus system shown in Fig. 1B is not without its disadvantages. (Specification, page 3 line 6 through line 13).

In rejecting claim 1, the Examiner concedes that Jobs does not disclose many of the features recited in claim 1. Specifically, the Examiner states:

Jobs does not teach the processor and bus controller being on a first circuit board; a midplane connected to the bus controller on the first circuit board; a plurality of additional circuit boards connected to the serial bus interface through the midplane; each additional board including one or more of the serial bus devices; local control logic for outputting a signal for controlling the state of the switch; and the local control logic controlling the switch to be in the first state when the switches on each of the other of the plurality of additional circuit boards are in the second state.

(Office Action, pages 2-3). The Examiner, however, contends that Atkinson discloses a midplane that includes a serial message bus connecting cards across the midplane and Buckley discloses the local control logic recited in claim 1. (Office Action, page 3). According to the Examiner, one of ordinary skill in the art would have found it obvious to combine these teachings to obtain the invention recited in claim 1. (Office Action, page 3).

Atkinson discloses a multiple application switching platform including a shelf that contains a midplane. (Atkinson, Abstract). Atkinson generally discloses that the midplane includes "message buses" 9A and 9B. (See Atkinson, col. 11, line 52 through col. 11, line 66).

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Buckley is directed to a control system for a marine vessel. Buckley generally discloses a bus to which is connected a controller that controls a device such as a pump. (Buckley, col. 19, lines 1-11).

Applicants submit that Jobs, Atkinson, and Buckley, either alone or in combination, do not disclose or suggest the features recited in claim 1. Moreover, Applicants submit that Atkinson and Buckley do not cure the admitted deficiencies of Jobs as applied to pending claim 1.

Claim 1 recites, among other things, a plurality of additional circuit boards that include a switch configured to electrically connect the circuit board corresponding to a switch to the first circuit board through a serial bus interface when the switch is controlled to be in a first state and to electrically isolate the circuit board corresponding to the switch from the serial bus interface on the first circuit board when the switch is controlled to be in a second state. As the Examiner concedes, Jobs does not disclose a plurality of circuit boards as recited in claim 1. (Office Action, page 2). Although Atkinson discloses a number of circuit boards connected through a midplane (Atkinson, Abstract), nothing in Atkinson discloses or suggests that each circuit board includes the switch recited in claim 1. Buckley merely discloses a bus connected to a local controller and a smart device, but completely fails to disclose or suggest a plurality of circuit boards containing a switch, as is recited in claim 1.

Claim 1 additionally recites that each of the plurality of additional circuit boards includes local control logic for outputting a signal for controlling the state of the switch, the local control logic controlling the switch to be in the first state when the switches on each of the other of the plurality of additional circuit boards are in the second state.

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Although Buckley may generally disclose a local control for a bus, the local controller of Buckley is said to control a device such as a pump 230. (Buckley, col. 19, lines 1-11). Nothing in Buckley discloses or suggests control logic for controlling a switch as recited in claim 1. More specifically, the local control logic recited in claim 1 outputs "a signal for controlling the state of the switch, the local control logic controlling the switch to be in the first state when the switches on each of the other of the plurality of additional circuit boards are in the second state." (emphasis added). Thus, the local control logic of claim 1 is recited as controlling a switch when switches at each of a plurality of additional circuit boards are in a specified state. Although Buckley may generally disclose controlling different devices in a marine vessel, this does not disclose or suggest the local control logic recited in claim 1.

Thus, Applicants submit that even if Jobs, Atkinson, and Buckley were combined as the Examiner suggests, the resulting combination would still not disclose or suggest each of the features recited in claim 1.

Applicants submit that the rejection of claim 1 under 35 U.S.C. § 103(a) is additionally improper as there is no motivation to combine the references as the Examiner suggests. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See MPEP 2143.01. In the Office Action, the Examiner states that one of ordinary skill in the art would combine the references "in order to provide a means for allowing system expandability ... increased flexibility ... a dense package ... and to convert the signal

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compatible with the bus protocol to a signal appropriate for controlling the valve switch.” (Office Action, pages 3-4). Applicants submit that these reasons given by the Examiner do not provide proper motivation to combine the references as the Examiner suggests.

For example, although expanding the address space is listed as a benefit in the disclosure of Jobs, Applicants submit that this motivation does not provide any reason to combine Jobs, Atkinson, and Buckley as the Examiner suggests. If anything, one of ordinary skill in the art reading the patent to Jobs would be likely to “expand the address space” in the systems of Atkinson and Buckley simply by incorporating the serial bus, as taught by Jobs, into the systems of Atkinson and Buckley.

The Examiner lists “increased flexibility,” citing column 6, lines 11-14 of Atkinson, as another reason to combine the references. The cited section of Atkinson, however, discloses that it is an object of the invention of Atkinson to “enhance flexibility of distributed telephone switches.” Applicants submit that Jobs and Buckley are in no way related to telephone switches, and accordingly, one of ordinary skill in the art reading this section of Atkinson would not be motivated to combine the system of Jobs (which relates to computer busses) with the system of Atkinson (which relates to a telecommunications system) with the system of Buckley (which relates to a marine vessel control system).

The Examiner further lists “dense packaging,” citing column 8, lines 62-63 of Atkinson, as another reason to combine the references. This section of Atkinson states “Midplane 1 receives these circuit cards on either midplane side for denser packaging.” Thus, this section of Atkinson relates to “dense packaging” of circuit cards by being able to insert the circuit cards on multiple sides of a midplane. If anything, this section of

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Atkinson would suggest modifying Jobs and/or Buckley to include densely packaged circuit cards. Applicants fail to see how this modification relates to the features recited in claim 1. Although claim 1 does recite a midplane and circuit boards, Applicants are not attempting to claim any particular way in which circuit boards are inserted into the midplane.

The Examiner further lists "to convert the signal compatible with the bus protocol to a signal appropriate for controlling the valve switch," citing column 18, line 66 through column 19, line 6 of Buckley, as another reason to combine the references. Applicants are unsure how this disclosure of Buckley, which relates to controlling a valve switch in a marine vessel, would suggest combining Buckley with either Jobs or Atkinson in the manner that the Examiner suggests. As noted above, Jobs and Atkinson relate to computer busses and telecommunications systems, respectfully, and do not appear concerned with controlling valves in a marine vessel.

For at least these reasons, Applicants submit that the rejection of claim 1 under 35 U.S.C. § 103(a) in view of Jobs, Atkinson, and Buckley is improper and should be withdrawn. The rejection of claim 2 should also be withdrawn, at least because this claim depends from claim 1.

Claims 1 and 2 were additionally rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Wong. For the following reasons, Applicants respectfully traverse.

In rejecting claim 1 based on Jobs, Atkinson, and Wong, the Examiner repeated much of the rejection of claim 1 based on Jobs, Atkinson, and Buckley. Instead of relying on Buckley, however, the Examiner stated "Wong teaches intelligent

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components that have a local controller for operating the component.” (Office Action, page 16).

Wong is directed to a fault-resilient automobile control system. The system of Wong includes a master control unit and a secondary control unit. (Wong, Abstract). The secondary control unit of Wong is a standalone computer that supports clients and other devices on a secondary support bus. (Wong, Abstract). The Examiner particularly points to column 3, line 58 through column 4, line 7 of Wong for the disclosure of intelligent components. This section of Wong discloses:

The master control unit 24 and the secondary control unit 26 are interconnected through the primary vehicle bus 28. In addition, various electronic automobile components are connected to the master control unit 24 via the primary bus 28. In this illustration, the electronic components include an antilock braking system (ABS) 32, an electronic steering system 34, and an engine control system 36. However, other components may likewise be connected to the primary vehicle bus 28, such as a security/alarm system, a diagnostic system, a lighting control system, a fuel injection system, an automatic transmission system, and so forth. In addition, the electronic components shown in FIG. 1 are intelligent components in that they each have their own local controller, typically embodied as a microprocessor. The automobile might further include non-intelligent electronic components which do not have local processing capabilities, as is explained below with reference to FIGS. 6-8.

Although this section of Wong mentions intelligent components, Applicants submit that this section of Wong fails to disclose or suggest the switch and the local control logic recited in claim 1. Indeed, Applicants are unsure what portion of claim 1 the Examiner believes is disclosed by Wong. If the Examiner continues this rejection, Applicants request that the Examiner provide additional detail as to the features in claim 1 that are allegedly disclosed by Wong.

In view of the foregoing, including the previous arguments made relating to Jobs and Atkinson, Applicants submit that Jobs, Atkinson, and Wong, either alone or in

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combination, fail to disclose or suggest each of the features recited in claim 1.

Accordingly, this rejection of this claim should be withdrawn.

Applicants submit that the rejection of claim 1 under 35 U.S.C. § 103(a) based on Jobs, Atkinson, and Wong is additionally improper as there is no motivation to combine the references as the Examiner suggests. The arguments given above regarding Jobs and Atkinson apply equally to this rejection under 35 U.S.C. § 103(a). Moreover, regarding Wong, the Examiner states that one of ordinary skill in the art would combine the references "to relieve the master from having to operate each device; to manage data flow from the devices ... and to provide redundant control for a device should its controller fail." (Office Action, page 17). Applicants submit that these reasons do not provide proper motivation to combine the references as the Examiner suggests. The Examiner is merely listing stated features/advantages of the system described by Wong. Virtually all patents include at least some general statement of the features or advantages of the patent. None of the features mentioned by the Examiner, however, suggest that Jobs, Atkinson, and Wong be combined as the Examiner suggests.

For at least these reasons, Applicants submit that the rejection of claim 1 under 35 U.S.C. § 103(a) in view of Jobs, Atkinson, and Wong is improper and should be withdrawn. The rejection of claim 2 should also be withdrawn, at least because this claim depends from claim 1.

Dependent claims 3 and 6 stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Buckley, as applied by the Examiner in rejecting claim 2, and additionally in view of Simpson. Applicants have reviewed the disclosure of Simpson, and submit that Simpson does not disclose or suggest the above-mentioned

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deficiencies of Jobs, Atkinson, and Buckley described above with reference to claim 2. Accordingly, these rejections of claims 3 and 6 should be withdrawn by virtue of the dependency of these claims from claim 2.

Dependent claims 3 and 6 additionally stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Wong, as applied by the Examiner in rejecting claim 2, and additionally in view of Simpson. Applicants have reviewed the disclosure of Simpson, and submit that Simpson does not disclose or suggest the above-mentioned deficiencies of Jobs, Atkinson, and Wong with regard to claim 2. Accordingly, these rejections of claims 3 and 6 should be withdrawn by virtue of the dependency of these claims from claim 2.

Dependent claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, Buckley, and Simpson, as applied by the Examiner in rejecting claim 3, and further in view of Li and Baxter. Applicants have reviewed the disclosures of Li and Baxter, and submit that neither of these two patents disclose or suggest the above-mentioned deficiencies of Jobs, Atkinson, Buckley, and Simpson with regard to claim 3. Accordingly, the rejections of claims 4 and 5 should also be withdrawn at least by virtue of the dependency of these claims from claims 1 or 3.

Dependent claims 4 and 5 additionally stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, Wong, and Simpson, as applied by the Examiner in rejecting claim 3, and further in view of Li and Baxter. Applicants have reviewed the disclosures of Li and Baxter, and submit that neither of these two patents disclose or suggest the above-mentioned deficiencies of Jobs, Atkinson, Wong, and Simpson. Accordingly, the rejections of claims 4 and 5 should also be withdrawn at least by virtue

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of the dependency of these claims from claims 1 or 3.

Dependent claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Buckley, as applied to claim 1, and further in view of Posner. Applicants have reviewed the disclosure of Posner, and submit that this patent does not disclose or suggest the above-mentioned deficiencies of Jobs, Atkinson, and Buckley with regard to claims 7 and 8. Accordingly, the rejections of claims 7 and 8 should also be withdrawn at least by virtue of the dependency of these claims from claim 1.

Dependent claim 7 recites additional features that are not disclosed or suggested by Jobs, Atkinson, Buckley, and Posner. Claim 7 further defines the additional circuit boards recited in claim 1 as including first, second, and third switches. The first switch selectively connects or disconnects a first portion of a serial bus, implemented by the serial bus interface from the first circuit board, to a second portion of the serial bus. The second switch selectively connects or disconnects the second portion of the serial bus to a third portion of the serial bus. The third switch selectively connects or disconnects the third portion of the serial bus to a fourth portion of the serial bus. The Examiner contends that these features of claim 7 are disclosed by Posner. (Office Action, page 6). Applicants respectfully disagree.

Posner discloses a cross-connect switch. As defined by Posner, a cross-connect switch is a switching network which allows pairs of signal lines to be connected without disturbing connections between other lines connected by the cross-connect switch. (Posner, column 1, lines 9-12).

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In contrast to Posner, claim 7 includes first, second, and third switches that selectively select or disconnect first, second, third, and fourth portions of the serial bus to one another. The switches of Posner, in contrast, are instead used to form a complete link between an input line and an output line. Thus, the features recited in claim 7 are significantly different than the cross-connect switches disclosed by Posner. The switches in Posner do not selectively select or disconnect portions of a serial bus. Posner merely creates or does not create a link. Accordingly, for this reason also, Applicants submit that claim 7 is not disclosed or suggested by the cited patents, either alone or in combination.

Dependent claims 7 and 8 additionally stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Wong, as applied by the Examiner in rejecting claim 1, and further in view of Posner. Applicants have reviewed the disclosure of Posner, and submit that this patent does not disclose or suggest the above-mentioned deficiencies of Jobs, Atkinson, and Wong with regard to claims 7 and 8. Accordingly, this rejection of claims 7 and 8 should also be withdrawn at least by virtue of the dependency of these claims from claim 1. Additionally, as previously discussed, Applicants submit that Posner fails to disclose or suggest the first, second, and third switches recited in claim 7. For this reason also, the rejection of claim 7 should be withdrawn.

Claims 9, 10, and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jobs, Atkinson, and Aggarwal. Applicants respectfully traverse this rejection.

Claim 9 is directed to a network device including a routing engine and a packet forwarding engine. The packet forwarding engine includes a midplane, a first circuit

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board having a master control processor, and a plurality of second circuit boards each having a control processor. The first and second circuit boards are electrically coupled through the midplane via a serial control bus. The second circuit boards each additionally include a switch configured to electrically connect the second circuit board to the first circuit board via the serial control bus when the switch is controlled to be in a first state and to electrically isolate the second circuit board from the serial control bus when the switch is controlled to be in a second state. The switch of a particular one of the second circuit boards is in the first state only when the switches on each of the other of the second circuit boards are in the second state.

The Examiner contends that Jobs discloses a number of the features recited in claim 9, but concedes that Jobs does not disclose a routing engine, a packet forwarding engine including a midplane, and a plurality of second circuit boards each having a control processor. (Office Action, pages 8 and 21). Applicants initially note that if the routing engine, the packet forwarding engine including a midplane, and the plurality of second circuit boards that are currently recited in claim 9 were removed from this claim, the only remaining feature of claim 9 would be "a first circuit board having a master control processor."

The Examiner relies on Aggarwal as disclosing a routing engine and is apparently relying on Atkinson to disclose the remaining features of claim 9. (Office Action, pages 8 and 21). Aggarwal is directed to methods and systems for substituting use of the normal checksum field space in IP datagram headers for obviating current processing time and addressing space limitations. (Aggarwal, Abstract). Atkinson, as mentioned above, discloses a multiple application switching platform including a shelf that contains

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a midplane. (Atkinson, Abstract). Atkinson generally discloses that the midplane includes "message buses" 9A and 9B. (See Atkinson, col. 11, line 52 through col. 11, line 66).

Applicants submit that Jobs, Atkinson, and Aggarwal, even if combined as the Examiner suggests, still do not disclose or suggest each of the features recited in claim 9. For example, none of these references discloses or suggests the plurality of second circuit boards recited in claim 9, where each includes a switch configured to electrically connect the second circuit board to the first circuit board via the serial control bus when the switch is controlled to be in a first state and to electrically isolate the second circuit board from the serial control bus when the switch is controlled to be in a second state, the switch of a particular one of the second circuit boards being in the first state only when the switches on each of the other of the second circuit boards are in the second state. Although Jobs may disclose a number of switches, the switches in Jobs are not included on a plurality of circuit boards and connected as recited in claim 9.

Additionally, Applicants submit that the rejection of claim 9 based on Jobs, Atkinson, and Aggarwal under 35 U.S.C. § 103(a) is additionally improper as there is no motivation to combine the references as the Examiner suggests. The Examiner appears to be simply picking and choosing various elements from the cited patents to obtain Applicants' invention. Applicants submit that this is not a proper rejection under 35 U.S.C. § 103(a), as it relies entirely on hindsight gleaned only from Applicants' specification.

On pages 8-9 and 21-22 of the Office Action, the Examiner lists a number of reasons why the Examiner believes it would be obvious to combine Jobs, Atkinson, and

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Aggarwal in the manner the Examiner suggests. Applicants have reviewed these reasons, and submit that each is a feature or benefit discussed by one of Jobs, Atkinson, or Aggarwal. Although these reasons do relate to why one may wish to individually implement the inventions of Jobs, Atkinson, and Aggarwal, none of these features suggest why one of ordinary skill in the art would be motivated to combine the various components of Jobs, Atkinson, and Aggarwal to obtain the invention recited in claim 9, which is significantly different than the disclosure of any of Jobs, Atkinson, and Aggarwal. Accordingly, Applicants submit that the Examiner has not presented a proper *prima facie* case of obviousness under 35 U.S.C. § 103(a), and the rejection of claim 9 should therefore be withdrawn.

The rejection of claims 10 and 13, at least by virtue of their dependency on claim 9, should also be withdrawn.

Dependent claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Aggarwal, as applied to claim 9, and further in view of Buckley. Applicants respectfully traverse this rejection.

As previously mentioned, Buckley is directed to a control system for a marine vessel. Buckley generally discloses a bus to which is connected a controller that controls a device such as a pump. (Buckley, col. 19, lines 1-11).

Dependent claim 11 further defines the device of claim 9, and recites that the second circuit boards each additionally include local control logic connected to receive control information from the master control processor and the control processor corresponding to the second circuit board of the local control logic, the local control logic controlling the switch to be in the first or second state based on the received control

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information. In contrast, Buckley merely discloses a bus connected to a local controller and a smart device, but completely fails to disclose or suggest the features recited in claim 11.

Claim 11 additionally recites that each of the plurality of additional circuit boards includes local control logic for outputting a signal for controlling the state of the switch, the local control logic controlling the switch to be in the first state when the switches on each of the other of the plurality of additional circuit boards are in the second state. In contrast, Buckley is said to control a device such as a pump 230. Nothing in Buckley discloses or suggests control logic for outputting a signal for controlling the state of the switch, as recited in claim 11. More specifically, the control logic recited in claim 11 outputs "a signal for controlling the state of the switch, the local control logic controlling the switch to be in the first state when the switches on each of the other of the plurality of additional circuit boards are in the second state." (emphasis added). Thus, the control logic of claim 1 is recited as controlling a switch when switches at each of a plurality of additional circuit boards are in a specified state. Although Buckley may generally disclose controlling different devices in a marine vessel, this does not disclose or suggest the control logic recited in claim 11.

Accordingly, for this reason, in addition to its dependency from claim 9, the rejection of claim 11 based on Jobs, Atkinson, Aggarwal, and Buckley should be withdrawn. The rejection of claim 12, at least by virtue of its dependency on claim 11, should also be withdrawn.

Dependent claims 11 and 12 additionally stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Aggarwal, as applied by the Examiner in

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rejecting claim 9, and further in view of Wong. Applicants respectfully traverse this rejection.

As previously mentioned, Wong is directed to a fault-resilient automobile control system. The system of Wong includes a master control unit and a secondary control unit. (Wong, Abstract). The secondary control unit of Wong is a standalone computer that supports clients and other devices on a secondary support bus. (Wong, Abstract). The Examiner particularly points to column 3, line 58 through column 4, line 7 of Wong for the disclosure of intelligent components. This section of Wong has been reproduced above. Although this section of Wong mentions intelligent components, Applicants submit that this section of Wong completely fails to disclose or suggest the control logic recited in claim 11. If the Examiner maintains this rejection, Applicants request clarification on how the Examiner is interpreting Wong to allegedly disclose the features of claim 11.

Accordingly, for this reason, in addition to its dependency from claim 9, the rejection of claim 11 based on Jobs, Atkinson, Aggarwal, and Wong should be withdrawn. The rejection of claim 12, at least by virtue of its dependency on claim 11, should also be withdrawn.

Dependent claims 14 and 17 stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, and Aggarwal, as applied to claim 13, and further in view of Simpson. Applicants have reviewed the disclosure of Simpson, and submit that this patent does not disclose or suggest the above-mentioned deficiencies of Jobs, Atkinson, and Aggarwal with regard to claim 13. Accordingly, this rejection of claims 14 and 17

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should be withdrawn at least by virtue of the dependency of these claims from claims 9 and 13.

Dependent claims 15 and 16 stand rejected under 35 U.S.C. § 103(a) based on the patents to Jobs, Atkinson, Aggarwal, and Simpson, as applied to claim 14, and further in view of Li and Baxter. Applicants have reviewed the disclosures of Li and Baxter, and submit that these patents do not disclose or suggest the above-mentioned deficiencies of Jobs, Atkinson, Aggarwal, and Simpson. Accordingly, this rejection of claims 15 and 16 should be withdrawn at least by virtue of the dependency of these claims from claim 14.

Claims 18 and 19 stand rejected under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, and Buckley. For the following reasons, Applicants respectfully traverse these rejections.

The Examiner appears to be relying on Atkinson for the disclosure of the local processor and the bus controller recited in claim 18. (Office Action, page 12).

Additionally, the Examiner relies on Posner to disclose the first, second, and third switches recited in claim 18. (Office Action, page 12). Finally, the Examiner relies on Buckley to disclose the local control logic recited in claim 18. (Office Action, page 12). Applicants respectfully disagree with the Examiner's interpretation of these references.

In contrast to Atkinson, Posner, or Buckley, claim 18 is directed to circuit board that includes, among other things, a first switch for selectively connecting or disconnecting a first portion of a two wire serial bus from an external circuit board to a second portion of the two wire serial bus; a second switch for selectively connecting or disconnecting the second portion of the two wire serial bus to a third portion of the two wire serial bus; and a third switch for selectively connecting or disconnecting the third

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portion of the two wire serial bus to a fourth portion of the two wire serial bus.

Applicants submit that the cited references completely fail to disclose or suggest these features of claim 18.

Posner, in particular, discloses a cross-connect switch. A cross-connect switch does not disclose or suggest the switches recited in claim 18, which selectively select or disconnect first, second, third, and fourth portions of a two wire serial bus to one another. The cross-connect switches of Posner are instead used to form a complete link between an input line and an output line. Thus, the features recited in claim 18 are significantly different than the cross-connect switches disclosed by Posner. Accordingly, for this reason also, Applicants submit that claim 18 is not the features of claim 18 are not disclosed or suggested by the cited patents, either alone or in combination.

For at least these reasons, the rejection of claim 18 should be withdrawn. The rejection of claim 19, at least by virtue of its dependency on claim 18, should also be withdrawn.

Claims 18 and 19 were additionally rejected by the Examiner under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, and Wong. As with the rejection of claims 18 and 19 on Atkinson, Posner, and Buckley, the Examiner relies on Posner as allegedly disclosing the first, second, and third switch recited in claim 18. For the reasons given above, Applicants respectfully disagree with the Examiner's interpretation of Posner. Accordingly, the rejection of claim 18 based on Atkinson, Posner, and Wong should be withdrawn. The corresponding rejection of claim 19, at least by virtue of its dependency on claim 18, should also be withdrawn.

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Dependent claim 22 stands rejected under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, Buckley, and Loftis. Applicants submit that Loftis does not disclose or suggest the above-mentioned deficiencies of Atkinson, Posner with regard to claim 18, and Buckley. Accordingly, this rejection of claim 22 should be withdrawn, at least by virtue of the dependency of this claim from claim 18.

Dependent claim 22 stands rejected under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, Wong, and Loftis. Applicants have reviewed the disclosure of Loftis, and submit that this patent does not disclose or suggest the above-mentioned deficiencies of Atkinson, Posner, and Wong, with regard to claim 18. Accordingly, this rejection of claim 22 should be withdrawn, at least by virtue of the dependency of this claim from claim 18.

Dependent claim 24 stands rejected under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, Buckley, and Li. Applicants have reviewed the disclosure of Li, and submit that this patent does not disclose or suggest the above-mentioned deficiencies of Atkinson, Posner, and Buckley. Accordingly, this rejection of claim 24 should be withdrawn, at least by virtue of the dependency of this claim from claim 18.

Dependent claim 24 was additionally rejected under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, Wong, and Li. Applicants submit that Li does not disclose or suggest the above-mentioned deficiencies of Atkinson, Posner, and Wong, with regard to claim 18. Accordingly, this rejection of claim 24 should be withdrawn, at least by virtue of the dependency of this claim from claim 18.

Dependent claim 25 stands rejected under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, Buckley, and Baxter. Applicants have reviewed the disclosure of

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Baxter, and submit that this patent does not disclose or suggest the above-mentioned deficiencies of Atkinson, Posner, and Buckley. Accordingly, this rejection of claim 25 should be withdrawn, at least by virtue of the dependency of this claim from claim 18.

Dependent claim 25 was additionally rejected under 35 U.S.C. § 103(a) based on the patents to Atkinson, Posner, Wong, and Baxter. Applicants submit that the disclosure of Baxter does not disclose or suggest the above-mentioned deficiencies of Atkinson, Posner, and Wong, with regard to claim 18. Accordingly, this rejection of claim 25 should be withdrawn, at least by virtue of the dependency of this claim from claim 18.

In view of the foregoing remarks, Applicants submit that the claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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